

## Neurological conditions overview

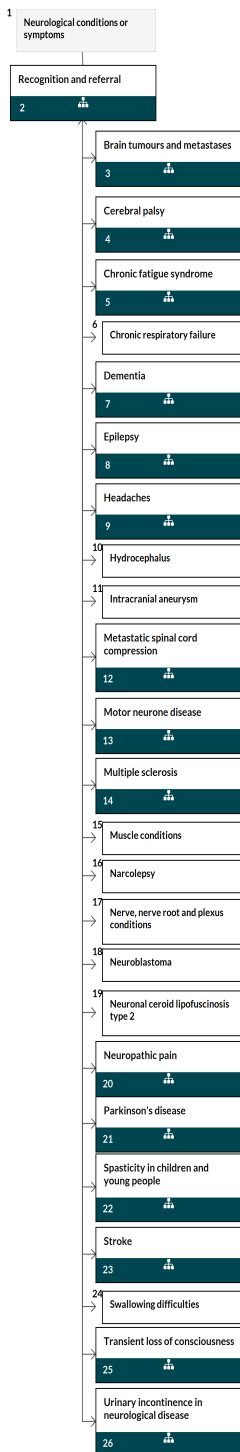
NICE Pathways bring together everything NICE says on a topic in an interactive flowchart. NICE Pathways are interactive and designed to be used online.

They are updated regularly as new NICE guidance is published. To view the latest version of this NICE Pathway see:

<http://pathways.nice.org.uk/pathways/neurological-conditions>

NICE Pathway last updated: 08 January 2021

This document contains a single flowchart and uses numbering to link the boxes to the associated recommendations.



## 1 Neurological conditions or symptoms

No additional information

## 2 Recognition and referral

[See Neurological conditions / Suspected neurological condition: recognition and referral](#)

## 3 Brain tumours and metastases

[See Brain tumours and metastases](#)

## 4 Cerebral palsy

[See Cerebral palsy](#)

## 5 Chronic fatigue syndrome

[See Chronic fatigue syndrome myalgic encephalomyelitis](#)

## 6 Chronic respiratory failure

**Intramuscular diaphragm stimulation for ventilator-dependent chronic respiratory failure caused by high spinal cord injuries**

NICE has published interventional procedures guidance on [intramuscular diaphragm stimulation for ventilator-dependent chronic respiratory failure caused by high spinal cord injuries](#), which should only be used in the context of **research**.

## 7 Dementia

[See Dementia](#)

## 8 Epilepsy

[See Epilepsy](#)

## 9 Headaches

[See Headaches](#)

## 10 Hydrocephalus

NICE has published interventional procedures guidance on [lumbar infusion test for the investigation of normal pressure hydrocephalus](#) with **normal arrangements** for clinical governance, consent and audit.

NICE has published interventional procedures guidance on [lumbar subcutaneous shunt](#) with **special arrangements** for consent and audit or research.

NICE has also published a medtech innovation briefing on [SecurAcath for securing cerebrospinal fluid catheters](#).

## 11 Intracranial aneurysm

### **Pipeline Flex embolisation device with Shield Technology for the treatment of complex intracranial aneurysms**

The following recommendations are from NICE medical technologies guidance on [Pipeline Flex embolisation device with Shield Technology for the treatment of complex intracranial aneurysms](#).

The case for adopting the Pipeline Flex embolisation device with Shield Technology in the NHS is supported by the current evidence when it is used in patients with complex giant or large intracranial aneurysms which are unsuitable for surgery and being considered for stenting, and where large numbers of coils would be needed during stent-assisted coiling.

The Pipeline Flex embolisation device with Shield Technology is estimated to be cost saving when compared with stent-assisted coiling, in patients with complex giant or large intracranial

aneurysms when the number of Pipeline embolisation devices inserted does not exceed 2, and when treatment would otherwise require the use of 34 or more coils combined with 1 stent for stent-assisted coiling. If 2 Pipeline embolisation devices are used the total procedure cost is estimated as £37,625 compared with £38,320 for the use of 34 coils for stent-assisted coiling (a saving of £695 using Pipeline embolisation device).

Clinicians should submit details of all patients being treated with the Pipeline Flex embolisation device with Shield Technology to the UK Neurointerventional Radiology Group audit database, to increase the evidence base and guide future use of this technology.

### Interventional procedures

NICE has published guidance on the following procedures with **normal or standard arrangements** for clinical governance, consent and audit:

- [endovascular insertion of an intrasaccular wire-mesh blood-flow disruption device for intracranial aneurysms](#)
- [coil embolisation of ruptured intracranial aneurysms](#)
- [coil embolisation of unruptured intracranial aneurysms](#)
- [supraorbital minicraniotomy for intracranial aneurysm.](#)

### Medtech innovation briefings

NICE has published a [medtech innovation briefing on pCONUS2 Bifurcation Aneurysm Implant for complex intracranial aneurysms.](#)

### Pregnancy and intrapartum care

For recommendations about mode of birth and management of the second stage of labour for women with subarachnoid haemorrhage or arteriovenous malformation of the brain see [intrapartum care for women with intracranial bleeding risk.](#)

## 12 Metastatic spinal cord compression

[See Metastatic spinal cord compression](#)

## 13 Motor neurone disease

[See Motor neurone disease](#)

## 14 Multiple sclerosis

[See Multiple sclerosis](#)

## 15 Muscle conditions

### Duchenne muscular dystrophy

The following recommendations are from NICE highly specialised technologies guidance on [ataluren for treating Duchenne muscular dystrophy with a nonsense mutation in the dystrophin gene](#).

Ataluren, within its marketing authorisation, is recommended for treating Duchenne muscular dystrophy resulting from a nonsense mutation in the dystrophin gene in people aged 5 years and older who can walk, only when:

- the company provides ataluren with the discount agreed in the patient access scheme
- the conditions under which ataluren is made available are set out in the [managed access agreement](#) between the company and NHS England, which should include the conditions set out in [sections 5.12 to 5.15 and 5.23](#) of this guidance.

This guidance is not intended to affect the position of patients whose treatment with ataluren was started within the NHS before this guidance was published. Treatment of those patients may continue without change to whatever funding arrangements were in place for them before this guidance was published until they and their NHS clinician consider it appropriate to stop.

NICE has written information for the public on [ataluren](#).

### Muscle spasms and contractions

NICE has published interventional procedures guidance on the following procedures with **normal arrangements** for consent, audit and clinical governance:

- [deep brain stimulation for tremor and dystonia \(excluding Parkinson's disease\)](#)
- [selective peripheral denervation for cervical dystonia](#).

NICE has published interventional procedures guidance on [unilateral MRI-guided focused ultrasound thalamotomy for treatment-resistant essential tremor](#) with **special arrangements** for clinical governance, consent and audit or research.

NICE has published a clinical knowledge summary on [neck pain - acute torticollis](#). This practical resource is for primary care professionals (it is not formal NICE guidance).

### Spinal muscular atrophy

The following recommendations are from NICE technology appraisal guidance on [nusinersen for treating spinal muscular atrophy](#).

Nusinersen is recommended as an option for treating 5q SMA only if:

- people have pre-symptomatic SMA, or SMA types 1, 2 or 3 and
- the conditions in the [managed access agreement](#) are followed.

See [why we made the recommendations on nusinersen](#).

NICE has written information for the public on [nusinersen for treating spinal muscular atrophy](#).

### Mitochondrial disorders

NICE has published an evidence summary on [mitochondrial disorders in children: Co-enzyme Q10](#).

### Myasthenia gravis

NICE is unable to make a recommendation on [eculizumab \(Soliris\) for treating refractory myasthenia gravis in adults](#) because Alexion Pharma UK did not provide an evidence submission. We will review this decision if the company decides to make a submission.

## 16 Narcolepsy

NICE has published an evidence summary on [narcolepsy with or without cataplexy in adults: pitolisant](#).

## 17 Nerve, nerve root and plexus conditions

### Morton's neuroma

NICE has published a clinical knowledge summary on [Morton's neuroma](#). This practical resource is for primary care professionals (it is not formal NICE guidance).

NICE has published interventional procedures guidance on [radiofrequency ablation for symptomatic interdigital \(Morton's\) neuroma](#) with **special arrangements** for clinical governance, consent and audit or research.

### Restless legs syndrome

NICE has published a clinical knowledge summary on [restless legs syndrome](#).

NICE has published an evidence summary on [restless legs syndrome: Oxycodone/naloxone prolonged release](#).

### Other nerve, nerve root and plexus conditions.

NICE has published interventional procedures guidance on the following procedures with **normal/standard arrangements** for clinical governance, consent and audit:

- [processed nerve allografts to repair peripheral nerve discontinuities](#)
- [endoscopic thoracic sympathectomy for primary facial blushing](#)
- [phrenic nerve transfer in brachial plexus injury](#).

NICE has published clinical knowledge summaries on [Bell's palsy](#) and [carpal tunnel syndrome](#).

## 18 Neuroblastoma

### Dinutuximab beta

The following recommendations are from NICE technology appraisal guidance on [dinutuximab beta for treating neuroblastoma](#).

Dinutuximab beta is recommended as an option for treating high-risk neuroblastoma in people aged 12 months and over whose disease has at least partially responded to induction chemotherapy, followed by myeloablative therapy and stem cell transplant, only if:

- they have not already had anti-GD2 immunotherapy and
- the company provides dinutuximab beta according to the [commercial arrangement](#).

This recommendation is not intended to affect treatment with dinutuximab beta that was started in the NHS before this guidance was published. People having treatment outside this recommendation may continue without change to the funding arrangements in place for them before this guidance was published, until they and their NHS clinician consider it appropriate to



stop. For a child or young person, this decision should be made jointly by them or their parents or carers and their clinician.

See [why we made the recommendations on dinutuximab beta](#).

NICE has written information for the public on [dinutuximab beta](#).

## 19 Neuronal ceroid lipofuscinosis type 2

### Cerliponase alfa

The following recommendation is from NICE highly specialised technologies guidance on [cerliponase alfa for treating neuronal ceroid lipofuscinosis type 2](#).

Cerliponase alfa is recommended as an option for treating CLN2, also known as TPP1 deficiency, only if the conditions in the [managed access agreement](#) are followed.

This recommendation is not intended to affect treatment with cerliponase alfa that was started in the NHS before this guidance was published. People having treatment outside this recommendation may continue without change to the funding arrangements in place for them before this guidance was published, until they and their NHS clinician consider it appropriate to stop. For children or young people, this decision should be made jointly by the clinician and the child or young person, or the child's or young person's parents or carers.

See [why we made the recommendation on cerliponase alfa](#).

NICE has written information for the public on [cerliponase alfa](#).

## 20 Neuropathic pain

See [Neuropathic pain](#)

## 21 Parkinson's disease

See [Parkinson's disease](#)

## 22 Spasticity in children and young people

[See Spasticity in children and young people](#)

## 23 Stroke

[See Stroke](#)

## 24 Swallowing difficulties

### Interventional procedures

NICE has published guidance on [endoscopic carbon dioxide laser cricopharyngeal myotomy for relief of oropharyngeal dysphagia](#) with **special arrangements** for clinical governance, consent and audit or research:

NICE has published guidance that [transcutaneous neuromuscular electrical stimulation for oropharyngeal dysphagia in adults](#) should only in the context of **research** for adults with dysphagia not caused by a stroke (see guidance for details).

## 25 Transient loss of consciousness

[See Transient loss of consciousness](#)

## 26 Urinary incontinence in neurological disease

[See Urinary incontinence in neurological disease](#)

## Glossary

### CLN2

neuronal ceroid lipofuscinosis type 2

### SMA

spinal muscular atrophy

### TPP1

tripeptidyl peptidase 1

## Sources

[Nusinersen for treating spinal muscular atrophy \(2019\) NICE technology appraisal guidance 588](#)

[Dinutuximab beta for treating neuroblastoma \(2018\) NICE technology appraisal guidance 538](#)

[Pipeline Flex embolisation device with Shield Technology for the treatment of complex intracranial aneurysms \(2012 updated 2019\) NICE medical technologies guidance 10](#)

[Cerliponase alfa for treating neuronal ceroid lipofuscinosis type 2 \(2019\) NICE highly specialised technologies guidance 12](#)

[Ataluren for treating Duchenne muscular dystrophy with a nonsense mutation in the dystrophin gene \(2016\) NICE highly specialised technologies guidance 3](#)

## Your responsibility

### Guidelines

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual

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needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

Local commissioners and providers of healthcare have a responsibility to enable the guideline to be applied when individual professionals and people using services wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with complying with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

### Technology appraisals

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, health professionals are expected to take these recommendations fully into account, alongside the individual needs, preferences and values of their patients. The application of the recommendations in this interactive flowchart is at the discretion of health professionals and their individual patients and do not override the responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or their carer or guardian.

Commissioners and/or providers have a responsibility to provide the funding required to enable the recommendations to be applied when individual health professionals and their patients wish to use it, in accordance with the NHS Constitution. They should do so in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

**Medical technologies guidance, diagnostics guidance and interventional procedures guidance**

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, healthcare professionals are expected to take these recommendations fully into account. However, the interactive flowchart does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

Commissioners and/or providers have a responsibility to implement the recommendations, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity, and foster good relations. Nothing in this interactive flowchart should be interpreted in a way that would be inconsistent with compliance with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.